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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/578,290	05/25/2000	James E Carey	1958.2001-000	5934

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[REDACTED] EXAMINER

VO, LILIAN

ART UNIT	PAPER NUMBER
2127	2

DATE MAILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/578,290	CAREY, JAMES E
	Examiner Lilian Vo	Art Unit 2127

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 25 May 2000.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 - 27 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-27 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

1. Claims 1- 27 are presented for examination.

Drawings

2. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4 - 7, 10, 13, 14 – 16, 19, 22, and 23 - 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zolnowsky (US Pat. 5,826,081) in view of Sullivan (US Pat. 5,438,680).

Regarding **claim 1**, Zolnowsky discloses in a multithreaded computing environment, a method of processing computing tasks (fig. 4A, 4B, and 5), comprising:

defining a plurality of work threads, each thread capable of processing a task (abstract);

defining a plurality of task queues, each task queue capable of queuing a plurality of tasks (fig. 5, abstract);

associating each task queue with a respective worker thread (col. 2, lines 18 – 28).

However, Zolnowsky did not clearly teach the process of assigning a task to a task queue in an essentially random fashion. This feature can be found in Sullivan in which tasks are simply assigned to processors in a generally random fashion (col. 6, lines 35 – 61). Therefore, it is obvious for one of ordinary skill in the art, at the time the invention was made to incorporate this feature to Zolnowsky to optimize the system performance with task assignment.

Regarding **claim 4**, Zolnowsky discloses the method of claim 1 further comprising, from a work thread, processing a task from the associated task queue (col. 2, lines 18 – 28).

Regarding **claim 5**, Zolnowsky discloses the method of claim 1 further comprising, from a work thread, processing a task from a task queue not associated with the thread (col. 2, lines 18 – 28).

Claims 6, 7, 10, 13, 14 – 16, 19, 22, and 23 - 25 are rejected on the same ground as stated above.

5. Claims 2, 3, 8, 9, 11, 12, 17, 18, 20, 21, and 26- 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zolnowsky (US Pat. 5,826,081) in view of Najork et al. (US Pat. 6,377,984).

in view of Sullivan (5438680)

Jun 5/2/03
Regarding **claim 2**, Zolnowsky did not clearly specify the step of assigning a task comprising selecting an empty task queue. Nevertheless, this feature is shown in Najork et al.'s invention (col. 3, lines 22 – 33). Therefore, it would have been obvious for one of ordinary skill in the art, at the time the invention was made include the teaching of Najork et al.'s invention to Zolnowsky to better load balancing the tasks by utilizing all of the empty queues while not overloading other busy queues in the system.

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Regarding **claim 3**, Zolnowsky discloses the method of claim 2 wherein selecting comprising determining whether the selected task queue is in a busy state (col. 2, lines 18 – 28, col. 8, lines 19 – 36).

Claims 8, 9, 11, 12, 17, 18, 20, 21, and 26- 27 are rejected on the same ground as stated above.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is (703) 305-7864.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Lilian Vo
Examiner
Art Unit 2127

lv
April 25, 2003


JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100